

# The Conservation Of Carnivorous Plants

By Martin Creek

The author—secretary of the IUCN/SSC Carnivorous Plant Specialist Group discusses the conservation challenges that face the species of Carnivorous Plant.

Since the 1970s, a great revival in public interest in Carnivorous plants as curiosities for the windowsill and greenhouse, not seen since the end of the last century, has been fueled by a steady supply of plants, particularly the venus fly trap and the American pitcher plants. In Western Europe, these have been marketed through garden centres and supermarket chains, largely in inadequately small pots, unsuitable compost, with misleading growing instructions. It seems very likely that these plants were originally wild-collected, the Netherlands merely serving as a transshipment station.

The pitcher plants, for example, are often imported into Europe as aged plants with immense, often pest-infested rhizomes of many years growth: one would expect cultivated plants to be younger, cleaner and more uniform in size. Lately, the plants offered for sale have improved in health and quality, but the suspicion is still that many may be of wild origin. Since such plants as the venus fly trap, for example, occur only in a restricted habitat and only in the U.S. Carolinas, the fact that tens or hundreds of thousands of plants are offered for sale every year in Europe alone, with little evidence of artificial propagation on any scale, must be a cause for concern to those interested in the long-term survival of this species in the wild. More information on the extent of plant collection and the effect this has on wild populations is imperative.

Of even more concern are some of the rarer American Pitcher plants such as *Sarracenia oreophila* (see photo), promoted as one of the world's 12 most endangered animal and plant species in 1988 by IUCN (Species 10:22-24). This species is now known from less than a dozen sites in N.E. Alabama,<sup>1</sup> endangered, not only by habitat destruction, but also, it is believed, by collection for the international trade in rare plants. Fortunately, this pitcher plant and two others, *S. rubra* ssp. *jonesii* and *S. rubra* ssp. *alabamensis*, have been listed on Appendix I of CITIES since 1981, effectively limiting their international trade. Moreover, all other species of *Sarracenia* and the California Cobra Lily *Darlingtonia* have been listed on Appendix II since 1987 and 1981 respectively—not hindering international trade, but demanding that they are accompanied by CITIES permits, so that trade can be monitored (Knees and Cheek, 1988). Regrettably, it seems that some traders successfully ignore the permit requirement when shipping plants.

The Australian pitcher plant, *Cephalotus follicularis*, which is accorded its own family, has been listed on Appendix II for many years. Although there is evidence of continued destruction of its highly restricted coastal swamp habitat for housing and golf course construction in Western Australia, the good news is that pressure from collectors seems to be dwindling as tissue culture techniques are increasingly efficient at producing inexpensive saleable plants to meet the demand from carnivorous plant growers.

The Asian pitcher plants, *Nepenthes*, are by far the most numerous and widespread of all pitcher plants. Unfortunately, many of the 70 or more species, often the most dramatically sculptured and beautifully coloured ones, are restricted to only a single mountain and thus highly vulnerable to extinction through excessive collection. Requiring warmer conditions than the American pitcher plants, their fate is not the supermarket and windowsill, but the tropical greenhouse of the wealthy orchid or

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<sup>1</sup>Ed. Note: Also, note recent sites in northeast Georgia and southwest North Carolina.

specialist collector. In Western Europe, some of the rarer species are listed by suppliers at 140 pounds sterling (c. U.S. \$230) each. Higher prices are probably obtainable in California and especially Japan where there appears to be a much larger demand.

In Borneo, one of the richest pitcher-plant hunting grounds, several cases of theft by commercial growers from Mt. Kinabalu, a Malaysian National Park and home of several *Nepenthes* species, have occurred in recent years. Particularly affected as been *Nepenthes rajah*, famous for its glistening red, rugby-ball sized pitchers that hold many pints of digestive fluid and trap rats. It is now believed to be restricted to only two or three populations on serpentine soils.

Two species, including *N. rajah*, are listed on Appendix I, the others all on Appendix II., but, as with *Sarracenia*, this has been effective only since 1981 and 1987 respectively, and it is still too early to say how effective this has been in monitoring and controlling trade.

The threat from trade does not seem so great amongst the sundews, rainbow plants, butterworts and bladderworts as for the pitcher plants, though several of the most spectacular and sought after species of Sundews and Butterworts are limited to only one or two populations and are thus vulnerable to extinction through collection. The larger threat in these groups seems to be through habitat destruction, as the wetlands in which they live are drained for agriculture, or planted for forestry. Many *Drosera* are restricted in distribution, *D. regia* being known only from a single mountain. Many other South African *Drosera*, for example *D. alba*, *D. acaulis*, *D. cuneifolia* (Obermeyers, 1970) and *D. slackii* (Cheek, 1987; Bennet & Cheek 1990) have highly restricted distributions and so are also vulnerable. In Western Australia, where *Drosera* are more concentrated than anywhere else on the globe, the tragedy is that until very recently (Lowrie, 1987, 1989), no competent inventory of the species has been made. Even now, more than half of the species of pygmy sundews are so recently known to science that they lack legitimate botanical names. Some of the species now exist as only single populations and several are threatened by habitat destruction—clearing for agriculture, forestry or mining. As Lowrie (1989: 70) says of one of his new species *D. leioblasta* is only known from one location, just north of Cataby. Extensive clearing has destroyed most of its former habitat. This prompts the thought that, if Lowrie has delayed his work by 10 years, even that single location might itself be destroyed by clearing and the world would forever be ignorant of this species ever having existed. Who knows how many more species of pygmy sundews Lowrie and his fellow enthusiasts might have discovered if they were born a generation ago, before clearance had proceeded in Western Australia as far as it has today?

The rainbow plants, *Byblis*, like *Cephalotus* are restricted to Australia and accorded their own family and Appendix II status. The two species differ greatly, the shrubby *B. gigantea* is restricted and vulnerable to clearance, whereas the annual *B. liniflora* extends across Northern Australia and is virtually a weed—certainly not worthy of Appendix II status.

No butterworts are known definitely to be affected by trade, but several of the poorly known Mexican species, e.g. *Pinquicula agnata*, have very small ranges (Taylor & Cheek, 1983) and might easily be wiped out by a single mining operation.

The Carnivorous Plant group is one of almost 100 specialist groups of the Species Survival Commission (SSC) which advises International Conservation bodies, particularly its parent body IUCN (International Union for Conservation of Nature and Natural Resources) on conservation matters. Specialist groups advising on animals, for example African Elephant and Rhino, and Parrots have existed for many years, and only relatively recently have groups advising on plants, for example the Cacti and Succulent group, come into being. The primary role of Specialist Groups is to speak generally for the species concerned in a conservation context and a key part of this is

to identify species that have difficulties in conservation terms. Once this has been done, the relevant international conservation bodies and authorities can be informed, where necessary pressurized and an assessment made of the possibility of removing the difficulty. At present the Carnivorous Plant Specialist group consists of a network of half a dozen volunteers scattered throughout the world in areas where a high diversity of species of Carnivorous Plants occur. However, these few cannot provide complete coverage of every carnivorous plant species. If YOU are concerned that a species is being threatened, whether by habitat destruction for agriculture, forestry, mining or housing, for example or by collection for the horticultural trade, please let me know, giving precise details and your name and address so that I can contact you. Without such information, the group cannot serve its purpose.

The author is grateful to Anne Mayo for her encouragement and comments on this article and to the Kew Magazine for permission to reproduce the painting of *Sarracenia oreophila* by Joanna Langhorne—to appear in colour with an article solely on this plant in a future number.

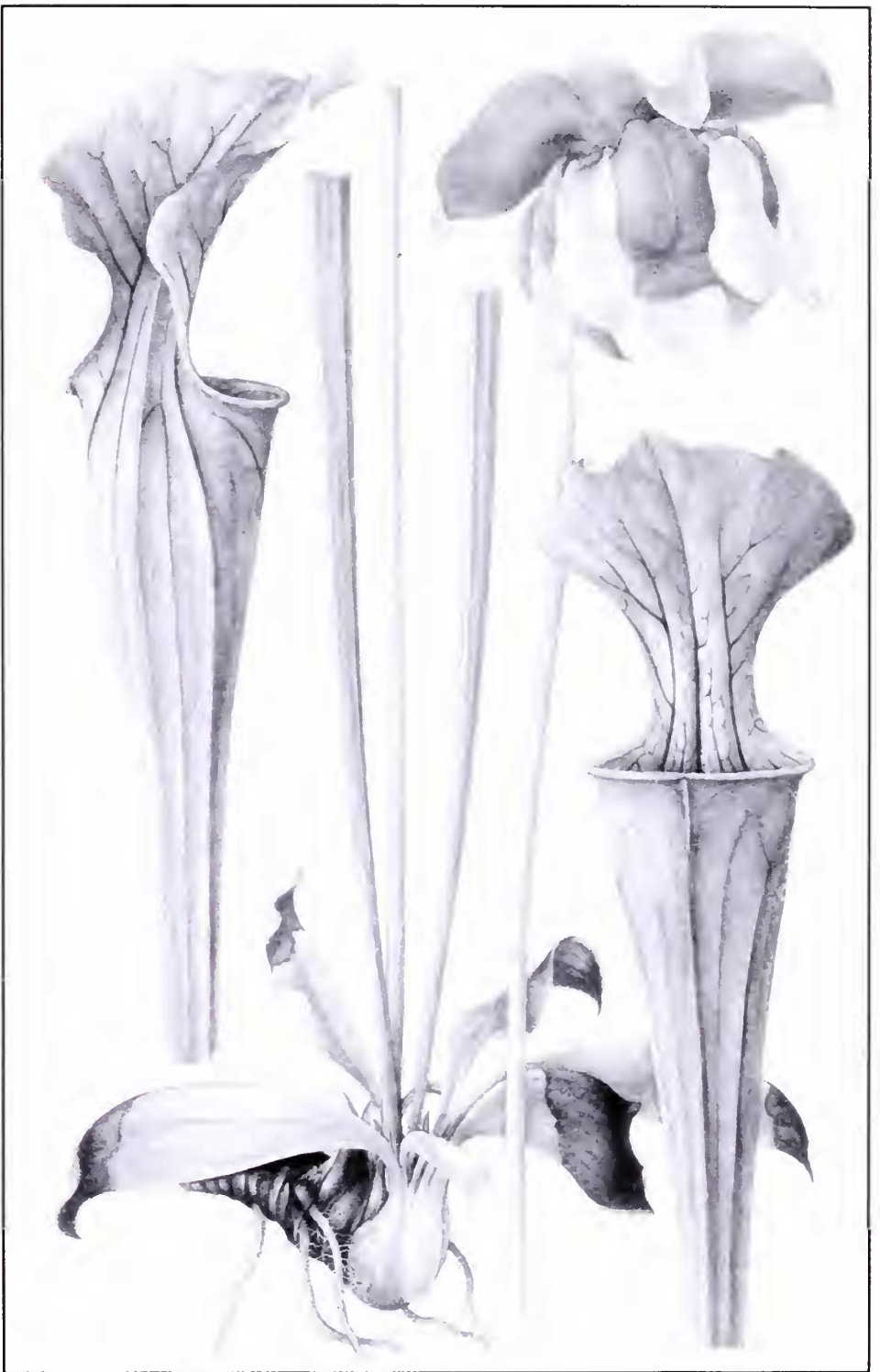
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## More News and Views

**Erik Holtzapple** (105 Hollytree Lane; Simpsonville SC 29681 USA) writes: I'm a high school student working at Roper Mountain Science Center and I'm trying to raise funds for a place for CP to be exhibited at the horticultural building at the Roper Mountain Science Center. I would be thankful if some of our members contribute CP and/or money to this project. We have a nice greenhouse to cultivate CP. Mr. DeBoer, the head naturalist at the Science Center, wanted me to write this letter to you all since I'm a member of the ICPS. I also want CP to be open to the general public to educate them of this fascinating group of flora, especially the SE US plants, to show how close these plants are growing to them; (also the Venus' flytrap and *S. rubra jonesii*) and a wide variety from other parts of the world. I am contributing a part of my collection and I hope you will too. If you can, please write to me or to Mr. Peter DeBoer; Roper Mountain Science Center; 504 Roper Mountain Road; Greenville SC 29615-4229 or phone him at 803/297-0232.



*Sarracenia oreophila*